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THE DRUG-USE PATTERNS OF HELPING-PROFESSION STUDENTS IN BRISBANE, AUSTRALIA*

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Summary

A survey of 1691 first- and final-year students in the helping professions (medicine, law, nursing, pharmacy, police science, seminary, social work/psychology, and teaching) as to their use of drugs was carried out during February to April, 1980, in Brisbane, Australia. The results indicated that about 86% drank coffee or tea, 85% drank alcohol, 85% used non-prescription analgesics, 31% used tobacco, 25% antihistamines, 9% marijuana, 9% sedatives, 6% tranquilizers, 2% hallucinogens, 2% stimulants, 1% cocaine and 1% used opiates at least once a year. Of these students, females used analgesics and antihistamines significantly more frequently than males and consumed more caffeine, tobacco and analgesics than males, while males drank significantly more alcohol than females. Final-year students used more alcohol, coffee or tea and tobacco, and used marijuana, coffee and tea and tobacco significantly more frequently than first-year students. Individuals who did not consider religion important used more alcohol and tobacco and used marijuana, tobacco and hallucinogens more frequently compared to individuals who considered religion to be important. There was also a significant difference in drug usage between the different courses of study for most of the substances, with law students using the majority of substances the most frequently and seminarians the least frequently.

Introduction

Individuals in helping professions such as doctors, teachers, police and lawyers, among others, have a high probability of treating the drug- and alcohol-dependent person, teaching about drug or alcohol abuse, or being in the position to change or uphold the existing drug laws. Though numerous studies have been carried out during the past ten years on the drug-taking behaviours of youth, only a few have examined the drug-taking behaviours of those individuals most likely to come into contact with drug users on a professional basis either as students or as acting professionals.

There are several reasons why it might be of interest to examine the drug-taking behaviours of this group. Studies [1 - 4] have reported that drug-use behaviours can influence attitudes concerning alcohol and drug abuse. Attitudes concerning the use and abuse of various substances on the part of the student or acting professional have been found to affect interaction with patients or clients who are abusing drugs or alcohol [5 - 8]; also it has been suggested that there is a high potential for drug and alcohol abuse among some of the helping professions [9 - 10].

*This project was carried out while the author was on sabbatical leave at the University of Queensland, Brisbane, Australia, January-June, 1980.

The Australian population consumes relatively large quantities of alcohol. It ranks number ten in the world for per capita consumption of alcoholic beverages, consuming approximately ten liters of absolute alcohol per year per person [11]. Studies in Australia during the middle and late 1970s report that from 66 to 82% of the adult population use alcohol [12], and that among tertiary students in Australia the rate of alcohol consumption has been found to be between 80 and 90% which is as high, or higher, than for the adult population as a whole [11, 13, 14].

Australia is also the highest consuming country in terms of non-prescription analgesics. In Queensland more than 16% of adult females and 10% of males take analgesics daily [15], with young women using these substances the most frequently. This high intake has resulted in a high rate of nephropathy and it is estimated that approximately one-third of kidney dialysis patients are the result of problems arising from the abuse of over-the-counter analgesics. Over one-third of the population smokes cigarettes and smoking is thought to be increasing among youth. Also there is a concern that there is increasing use of various illicit drugs including marijuana and heroin among the youthful population [16].

Although a few studies outside of Australia in recent years have investigated the drug-use patterns of university students in general [17 - 20] and helping-profession students in particular [21, 22], only a few [11] have been carried out in Australia to determine drug use of tertiary students, and, in particular, helping-profession students.

Thus, because Australia has the highest alcohol consumption of the English-speaking countries, has the highest consumption rate of non-prescription analgesics in the world, and because few studies have been accomplished on tertiary students in general and helping-profession students in particular, it would be of interest to study the drug-use patterns of Australian helping-professional students.

Methods

Sample

The following were asked to participate in the survey: all first- and final-year students from the law and pharmacy schools, from the social work and therapeutic psychology departments, and the first- and fourth-year students in the medical school (the last year for which medical students are together in large lecture classes), at Queensland University; first- and last-year students from the police academy and all religious seminaries in the Brisbane area; first- and final-year students in four nursing schools, representing a large and a small public and private institution; and all students in tertiary institutions training teachers in physical education, home economics and social and physical science education.

Before administration of the questionnaire, the purpose of the study, procedures used to safeguard students' anonymity and the voluntary character of the participation were discussed. From the total possible number of students 152 individuals (9%) either did not wish to participate or returned questionnaires with obviously faked responses (for example, filling in 99 bottles of beer, *etc.*, for usual daily consumption). This percentage ranged from zero for the police cadets to 22% for the social work/psychology students. The final sample included 1691 students, of whom 53.1% were male and 46.9% female; 50.5% were first-year and 49.5% last-year students. Of the total sample 54.7% indicated that religion was important to them, whereas 45.3% did not feel that way. The religion in which they were brought up comprised 27.7% Church of England, 28.5% other Protestant, 37.3% Catholic and 11.5% other or none. The mean age of the total group was 20.2 years.

The questionnaire

The questionnaire was compiled on the basis of World Health Organization recommendations for standardization in research on drug and alcohol behaviours [23, 24]. The demographic variables of sex, age, religion and religiosity which have been shown in previous studies of tertiary aged students and youth to affect alcohol and drug-taking patterns in Australia and other countries were included [17, 20, 22, 25]. Items asking for the quantity and frequency of the use of various substances were compiled based on questions used in Australian Commonwealth and other studies [12, 26].

The quantification of substance use

To assess the amount of alcohol, caffeine in coffee and tea, cigarettes, over-the-counter pain medication and joints of marijuana, each respondent was asked to report his/her usual frequency of use for the various substances and the usual amount consumed per occasion during the past year [26]. The grams of absolute alcohol in beer, wine and spirits, milligrams of caffeine from coffee and tea, and the number of pain pills, cigarettes and joints of marijuana were calculated for each person for the usual amount consumed per occasion. Based on the standard amount of alcohol in various beverages suggested by the beverage industry and other studies in Australia and on the amount of caffeine found in coffee and tea, the grams of alcohol and milligrams of caffeine were calculated [11, 27, 28] (Each 10 oz. (285 ml) of beer was considered to contain 10.4 g of absolute alcohol, each wine glass of wine (90 ml) 8.2 g, and each "nip" (30 ml) of spirits 9.2g of absolute) alcohol.

To determine the average amount of any substance consumed per day, the frequency-of-use responses were assigned "loading values" from 365 for those individuals who reported that they consumed the product every day, to zero for those who had not used the substance during the past year. The loading value was then multiplied by the quantity of the substance consumed and divided by 365 to obtain the amount consumed on a daily basis.**

The amount of absolute alcohol consumed on a daily basis was calculated as the sum total of absolute alcohol consumed in the form of beer, wine and spirits per day. To calculate the amount of caffeine consumed per day the amounts of caffeine in coffee and tea were added together.

Based on the World Health Organization recommendations [23, 24] over 60 g/day of absolute alcohol (about 6 average drinks) is considered "at risk" drinking in terms of physical or psychosocial health. The daily consumption of over 750 mg of caffeine (6 cups) is considered to be heavy drinking with possible health consequences. An average of two non-prescription analgesics per day [15, 28] and over 10 cigarettes per day are considered to increase the chances of illness and would be considered to be an "at risk" usage of these substances. There is no agreed consumption level of marijuana which may increase an individual's health risk.

Reliability of instrument

To comment on the various items considered for inclusion in the questionnaire, a panel of individuals currently working as educators for students in the service-oriented professions was assembled. A preliminary questionnaire was then constructed and presented to a group of teaching and health students. After revision the questionnaire was submitted to 82 other students and the reliability of the instrument was tested by administering it to these same students after two weeks. Reliability was calculated by using the Pearson product-moment correlation. The test-retest reliability of the quantity and frequency of substance usage ranged from 0.62 to 0.95, with a mean of 0.72.

**The factors used in calculating the amount of substance consumed were: every day = 365; 3 or 4 times a week = 182; 1 or 2 times a week = 78; 2 to 4 times a month = 34; 2 or 3 times a year = 3.5; about once a year = 1.0; have used or experimented with = 0.1; never used = 0.

Calculations

The *Statistical Package for the Social Sciences* [29] program was used to derive t , F , and X^2 statistics to determine the probability of differences between demographic variables and the use of various substances.

Results

Alcohol

Alcohol was the most frequently consumed drug. However, since the details of alcohol consumption patterns by this group, minus the teacher, are being reported in a separate paper [30], only a short summary will be presented here. Table 1 shows that most students drank at least once a year or more. Of the students about half (55.8%) drank once a month or more and about one-fourth (26.3%) drank at least once a week. Table 2 shows that males consumed significantly more alcohol ($t = 8.7$, d.f. = 909, $p < 0.001$) than females with a mean absolute alcohol consumption of 20.6 g/day compared to 8.3 g/day. Final-year students drank significantly more alcohol ($t = 2.3$, d.f. = 1368, $p < 0.05$) than first-year students (13.0 vs. 16.4 g/day). Likewise, individuals who did not consider religion important consumed more alcohol ($t = 3.7$, d.f. = 1189, $p < 0.001$) than those who consider religion important (17.7 g absolute ethanol per day vs. 11.8 g/day). Of the different courses of study, law students drank the most and seminary students the least ($F = 7.3$, d.f. = 7, $p < 0.05$). The results of this study appear to be similar to other studies which show that the demographic variables of sex, year in school and religiosity are factors in alcohol use [11, 17, 20, 25].

Non-prescription analgesics

General

Analgesics were consumed at least once a year by 85% of the population (Table 1). Of the total group 28.2% consumed analgesics at least once a month and 3.5% at least once a week. The mean dose consumed per year was 39.6 tablets or powders. No student consumed over two tablets per day, a dosage which is considered to have a high probability of causing kidney damage. The mean dosage per occasion was 2.1 tablets or powders. This is much lower than for the population at large in Australia which consumes approximately 270 doses per year [11]. Also, fewer students consumed analgesics as compared to the tertiary students studied by Krupinski and Stoller [13], who reported that 6.0% of the students in their sample consumed analgesics at least once a week.

Sex

Table 2 shows that women significantly ($t = 2.5$, d.f. = 7.65, $p < 0.05$) use larger amounts of non-prescription analgesics per year than men (49.1 vs. 30.7 doses/year). Almost twice as many ($X^2 = 71.7$, d.f. = 5, $p < 0.001$) women used analgesics on a monthly (41.4%) and on a weekly (4.4%) basis compared to men (20.0% and 2.9%, respectively). Other reports [11, 15] also show that women tend to use more analgesics than men.

Year in school and religion

There is no significant difference in the amount or frequency of analgesic consumption due to year in school, the importance of religion or religious preference. Some studies report that the use of analgesics increases with age; however, for these students there does not appear to be a significant increase as they go through their courses of study [16].

Course of study

From Table 2 it can be seen that there is no significant differences between the amount of analgesics consumed by the students in the different courses of study. However, there does appear to be a significant difference ($X^2 = 75$, d.f. = 28, $p < 0.001$) in the pattern of use of these substances (Table 3). On a weekly basis 8% of social work/psychology students, followed by 5.0% law, 4.2% nursing and 4.1% pharmacy, use analgesics, and less than 3% of all other groups use them on a weekly basis. It is interesting to speculate why social work/psychology students use the most analgesics. The mean age of this group was 25 years and approximately 62% were female. Both the mean age and proportions of women in this group are higher than the sample mean and other studies have reported that age and sex are factors in the consumption of over-the-counter analgesics. Although this study appears to confirm other reports which suggest that more females use analgesics than males, there does not appear to be a significant increase in consumption of analgesics as students go through their schooling.

Caffeine

General

Almost all students (86.5%) consumed coffee or tea on a regular basis (more than once a year) during the preceding 12 months (Table 1). Most consumed coffee (70.8%) or tea (65.8%) at least once a week and 46.2% consumed coffee and 61.8% consumed tea daily. The group consumed a total of 286 mg of caffeine per day (equivalent to approximately 2.4 cups of coffee). Of the total group 9.8% drank over 750 mg of caffeine per day (6 cups) which is considered possibly harmful to health. Studies of caffeine use among tertiary students or adults in Australia were not available. However, recent reports in other countries have indicated regular coffee and tea use among tertiary students. Weinstein [18] and Stokes [31] both reported that approximately 73% of students in their sample used coffee or tea at least once a week.

Sex

Females consumed significantly ($t = 1.1$, d.f. = 1385, $p < 0.001$) higher amounts of coffee than males (320 vs. 258 mg of caffeine per day), though there was no significant difference in the frequency of coffee or tea consumption between males and females. Other reports have also indicated that females tend to consume more coffee than males [28, 32].

Year in school and religion

Table 2 shows that individuals in their final year of study consumed significantly more caffeine ($t = 4.8$, d.f. = 1334, $p < 0.001$) than first-year students (329 vs. 245 mg/day). They also had slightly significantly different ($X^2 = 17.5$, d.f. = 5, $p < 0.05$) consumption patterns (Table 1), with 47.2% final-year students compared to 38.4% first-year students drinking coffee or tea every day. There was no significant difference (Tables 1 and 2) between the consumption patterns due to religious preferences or importance of religion among this sample.

Course of study

When Tables 2 and 3 are examined, a significant difference ($F = 2.1$, d.f. = 7, $p < 0.05$) is seen between the different courses of study and the consumption of caffeine, with the lowest consuming group being the teachers and the highest group the social work/psychology students. There is also a significant difference in frequency of drinking coffee or tea, with 49.2% of social work/psychology students down to 32% of teachers using coffee or tea on a daily basis ($X^2 = 71$, d.f. = 28, $p < 0.05$).

This suggests, as has also been found in other studies, that women tend to drink more coffee or tea compared to men. The results of this study also appear to indicate that last-year students are apt to consume more coffee and tea, which might be due to their higher age and the influence of the course of study on caffeine consumption, possibly as a result of peer influences.

Tobacco

General

Tobacco was the fourth most commonly used drug by the students in this study (Table 2). About 30.5% considered themselves to be regular users (more than once a year). Of all students 18.4% smoked at least once a week and 12.9% smoked daily, with 18.2% smoking between one and ten cigarettes, 4.4% between ten and twenty and 4.3% over twenty cigarettes per day. The mean consumption per day of all smokers was 6.5 cigarettes. Other studies with tertiary students in Australia have shown that 23.3% [13] to 35.5% [33] smoke on a daily basis. Fewer of the students in this sample appeared to smoke compared to the other Australian studies, and the results of this survey do not appear to support the trend of increased smoking among youth as reported by others [11, 16].

Sex and year in school

There is no significant difference between the sexes in either patterns of tobacco consumption or the amount of cigarettes consumed per day (Tables 1 and 2). This appears to be contrary to other Australian reports [11] and reports from other countries [21, 22, 18] that males tend to be more frequent and heavier smokers than females.

From Tables 2 and 3 it is seen that there is a significant difference ($t = -3.7$, d.f. = 405, $p < 0.001$) between final- (8.0) and first-year (5.1) students in the number of cigarettes they consume on a daily basis, while there was no significant difference in the frequency of smoking. Studies in Australia [11] and other countries [22, 21] have shown that there is an increase in smoking which reaches its peak in the mid-twenties to mid-forties for both men and women and that final-year tertiary students smoke more than first-year students. The increase in the number of cigarettes smoked between the first- and final-year students may be a reflection of this general increase with age.

Importance of religion and religious preference

Tables 1 and 2 show that there is a significant difference ($t = 2.4$, d.f. = 430, $p < 0.05$) in the number of cigarettes smoked per day by the "importance of religion" variable. Individuals who consider religion important consume a mean of 5.5 cigarettes per day compared to 7.4 for individuals who do not consider religion important. Likewise, there is a significant difference ($X^2 = 35.4$, d.f. = 21, $p < 0.05$) in smoking patterns due to religious preference, with 15.7% of Catholics, 13.7% of Church of England, 11.5% of other or not religious preference, and 8.8% of other Protestants smoking daily. Numerous studies, including a recent one by Murty [25], report that religion and religiosity can predict smoking and drug-taking behaviours with very religious individuals tending not to smoke as much as others.

Course of study

When course of study is examined (Tables 2 and 3), it is seen that there is a significant difference ($F = 2.2$, d.f. = 7, $p < 0.05$) in both the number of cigarettes consumed and the frequency of consumption ($X^2 = 113$, d.f. = 28, $p < 0.001$) between the courses. Police (7.4), nurses (7.1) and law students (7.1) consume the highest number of cigarettes per day while seminarians (5.0) and medical students (5.0) consume the lowest number. On a daily basis, 22.1% of nurses, 19.6% of social work/psychology students and 18.8% of police students smoke, decreasing to 15.1% of law students, 11.6% of pharmacy students, 6.3% of medical students, 8.0% of teachers and 3.1% of seminary students. It is interesting to note that nursing students had one of the highest intakes of cigarettes and medical students one of the lowest. The reason for this is not clear as both are in the health professions and are presumed to be familiar with the health consequences of smoking.

There appears to be no difference between the sexes in smoking patterns, contrary to many other studies. Final-year students and those who do not consider religion important are more apt to smoke than first-year students and individuals who consider religion important, which supports the results of other studies carried out in various places.

Antihistamines

Table 1 shows that 25.3% of the sample used antihistamines more than once a year. On a monthly basis, 4.6%, and on a weekly basis, 2.8%, of the sample had used antihistamines. Females consumed antihistamines significantly ($X^2 = 22$, d.f. = 5, $p < 0.001$) more frequently than males, with 4.9% consuming them on a monthly basis compared to 3.4% of males. There was no significant difference between antihistamine consumption patterns and year in school, the importance of religion or religious preference, or course of study (Table 3). It appears that females consume antihistamines more frequently than males as has been found with various other prescription and over-the-counter psychoactive medications [11, 16].

Marijuana

General

Approximately one-fifth (19.4%) of students in the sample had tried marijuana at least once while 9.1% considered themselves to be regular users (more than once a year). The mean number of "joints" consumed per month was 7.0 and the mean number per week was 1.2. Of all students 4.1% smoked marijuana at least once a month and 1.5% smoked it at least once a week. In comparison with studies accomplished in Australia in recent years, fewer students in this sample have tried marijuana when compared to 23.4% of tertiary students in Krupinski and Stoller's [13] study, 18.4% of the nurses in the study by Bell *et al.* [33], and 49.3% of the law students in Brown's [2] study. It has been suggested by some Australian reports [11, 16] that the use of marijuana is increasing among youth. This study does not appear to substantiate this hypothesis, at least for this sample of helping-profession students.

Sex

There was no significant difference in the number of "joints" smoked by males and females nor was there a significant difference in the frequency of marijuana use (Table 1) between male and female students. Other studies accomplished in Australia in recent years [13, 33] have indicated that more males smoke marijuana than females and studies accomplished in other countries in recent years have also reported this [21, 22].

Year in school

Though more joints of marijuana (10.4) were smoked by final-year students compared to first-year students (6.8), the difference was not significant. However, there was a significant difference ($X^2 = 13.4$, d.f. = 5, $p < 0.05$) in the frequency of use by year in school. Of the final-year students, 5.2% used marijuana on a monthly basis and 2.4% on a weekly basis compared to 3.4% and 0.9%, respectively, of first-year students. This appears to support other studies which suggest that the use of drugs increases as students go through school [21].

Importance of religion and religious preference

There was a significant difference ($X^2 = 37.7$, d.f. = 21, $p < 0.05$) between religious preference and the percentage of individuals who used marijuana. Of the Catholics, 5.5% smoked marijuana at least once a month compared to 4.7% of other or no religion, 3.4% of Church of England and 2.3% of other Protestants.

There was no significant difference in the number of joints smoked due to importance of religion; however, there was a significant difference in the frequency of use ($X^2 = 73$, d.f. = 5, $p < 0.001$) due to importance of religion, with 14.5% of not very religious compared to 4.7% of very religious individuals using marijuana at least once a year, and 6.9% compared to 1.9%, respectively, using marijuana on a monthly basis. Other recent studies [25] have also reported that religiosity is a predictor of drug-taking behaviours, and that very religious students are less likely to use a variety of substances than those who do not consider religion important to them.

Course of study

There was no significant difference between the courses of study and the amount of marijuana consumed. However, there was a significant difference ($X^2 = 84$, d.f. = 28, $p < 0.001$) in the frequency of consumption between the different courses of study (Table 3). The highest rate of usage was for law students, with 17.9% using marijuana more than once a year decreasing to less than 1% for seminarians. On a weekly basis, 4.6% of law students, 2.1% of teachers, and 1.6% of social worker/psychology students smoked marijuana. Less than 1% of all other groups used this substance weekly.

Why more law students use marijuana than some of the other groups is not clear. Brown [2] also reported that a large number of law students in his sample had used marijuana, a percentage which appeared to be higher than for other studies carried out on tertiary students.

Though there was a significant difference in the frequency of use for all of these demographic variables except sex, there was no difference in the amount of marijuana smoked. Apparently, individuals who smoke marijuana, no matter what year in school, or how important religion is in their lives, or their course of study, consume similar quantities.

Sedatives and tranquilizers

Of all the students, 8.5% had used sedatives more than once a year and 1.0% more than once a month. Tranquilizers were used more than once a year by 6.1% of the group and 1% used them on a monthly basis. Krupinski and Stoller [13] showed that 11.2% of their tertiary students were "current" users of either sedatives or tranquilizers, and Bell *et al.* [33] reported that 18.8% of a sample of nurses used these substances at least some times during the year. It appears that the students in this study were using fewer sedatives and tranquilizers than students in these other Australian studies.

There was no significant difference (Table 1) between the use of sedatives and tranquilizers due to sex, year in school or importance of religion. This appears to be contrary to other studies [11, 15] which report that the use of sedatives and tranquilizers is more common among women than men and that it increases with age.

When Table 3 is examined as to the use of sedatives and tranquilizers by course of study, a significant difference is seen; 11.1% of social work/psychology students and 10.1% of seminary students use tranquilizers more than once a year, while only 3.7% of medical students use this drug. The reasons for these differences are not clear.

Hallucinogens, stimulants, cocaine and opiates

Five per cent or less of the students had ever tried these substances. Though there is a significant difference in the frequency of use of hallucinogens and opiates for the variables of importance of religion, and for the use of opiates for year in school, this difference is not meaningful for practical purposes since the differences between the groups in all cases is less than 1%.

In Australia it is estimated that between 3 and 6% of individuals between 15 and 25 years of age have used hallucinogens at some time which is similar to this sample. Australia-wide there has been a decrease in the use of stimulants and an increase in cocaine use among youth (between 6 and 10% are estimated to have tried this substance). Between 1 and 2% are estimated to have used opiates [11]. The results of this study appear to show similar patterns. However, when compared to results from recent studies in the United States, the use of cocaine and hallucinogens among this present sample is relatively low.

Discussion and conclusions

It appears that the helping-profession students in this study tend to use most drugs but slightly less as compared to other studies carried out during the past few years in Australia with tertiary students. This may be due to the fact that these students were all in the helping professions, or to the conservative nature of students in the Brisbane area, who are perhaps less inclined to use a variety of substances than are

students in other parts of Australia (Queensland is widely considered to be one of the more conservative areas of the country), or to different sampling or calculation techniques.

Males in this study tend to use a larger quantity of alcohol than females, while females tend to use non-prescription analgesics, coffee and tea and antihistamines in greater quantity and frequency than males. There were no significant differences between the use of other substances, including tobacco and marijuana. Recent reports, however, in various countries tend to suggest that males consume these and other illicit drugs more frequently than females [16, 21, 22] and that females tend to use more over-the-counter analgesics, sedatives and tranquilizers than males.

Final-year students use larger quantities of alcohol and coffee and tea and in greater frequency. They use marijuana and opiates more frequently than first-year students and greater quantities of tobacco. Other studies have suggested that as students go through their university or tertiary school experiences they tend to use a wider range of substances and increase the intake of socially accepted substances such as alcohol, tobacco and coffee [17 - 22].

It was found that very religious individuals consumed alcohol and tobacco in lower quantities and less frequently, and marijuana, hallucinogens and opiates less frequently. Religious preference also had an effect on drug-taking patterns with Roman Catholics consuming more alcohol and smoking the most, while "other Protestants" and "others" consumed these substances the least frequently.

Course of study affected the frequency of all drugs used with the exception of antihistamines, hallucinogens, stimulants, cocaine and opiates. Law students consumed the highest amount of alcohol and used marijuana and sedatives the most frequently. Nurses consumed cigarettes more frequently than other groups. Social work/psychology students consumed the greatest amount of coffee and tea and cigarettes per day and used tranquilizers the most frequently. Pharmacy students consumed non-prescription analgesics the most frequently and seminary students consumed coffee or tea and antihistamines the most frequently. The reasons for the differences in use of these substances by the different courses is not clear and further research is needed in this area.

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Table 1: The percentages of students who had "ever used" drugs compared to students who considered themselves "current users" (more than once a year) by sex, year in school and religiosity during the 12 months preceding the study.

Drug	Total (n = 1691)		Sex				Year in school				Importance of Religion			
			Male (n = 897)		Female (n = 794)		First (n = 853)		Final (n = 838)		Very (n = 926)		Not (n = 7650)	
	Ever (%)	Current (%)	Ever (%)	Current (%)	Ever (%)	Current (%)	Ever (%)	Current (%)	Ever (%)	Current (%)	Ever (%)	Current (%)	Ever (%)	Current (%)
Alcohol	89.3	85.3	86.5	81.8	92.5	89.5*	89.0	83.2	90.3	87.2	73.2	68.0	92.0	86.8*
Analgesics	89.0	85.4	86.3	82.1	92.3	88.7*	88.1	83.6	90.0	86.8	88.9	84.8	89.2	85.5
Coffee and Tea	88.8	86.5	88.4	86.5	89.0	87.0	87.1	84.5	90.7	88.8*	89.1	87.3	88.7	85.9
Tobacco	46.5	30.5	47.8	31.6	44.9	29.1	48.0	31.1	44.6	29.8	40.6	24.6	52.9	36.9*
Antihistamines	29.7	25.3	25.8	21.7	34.3	29.6*	27.5	24.5	31.7	26.0	30.0	25.9	29.0	24.2
Marijuana	19.4	9.1	20.3	10.0	18.4	8.1	16.4	7.6	22.5	10.7**	12.0	4.7	28.2	14.5*
Sedatives	14.7	8.5	13.7	7.4	17.0	9.8	13.1	8.8	16.1	8.1	14.1	8.6	15.4	8.4
Tranquilizers	11.7	6.1	9.7	4.3	12.9	7.1	9.5	5.7	13.5	6.2	11.2	6.7	11.3	5.3
Hallucinogens	5.1	1.6	5.0	1.9	5.1	1.2	3.9	1.4	6.1	1.6	3.1	0.6	7.5	2.8*
Stimulants	4.5	1.8	5.5	2.63	3.3	1.2	4.4	2.0	4.6	1.5	3.6	2.3	5.8	3.3
Cocaine	1.5	1.0	1.9	0.7	1.1	0.4	1.1	0.6	1.5	0.5	1.4	0.5	1.8	0.7
Opiates	1.4	1.0	1.8	0.4	0.9	1.4	1.2	0.1	2.0	0.7**	0.5	0.0	2.5	1.6*

* $p < 0.001$

** $p < 0.05$

Table 2: Comparison of mean grams of caffeine and number of cigarettes per day and number of analgesics per year* of students by sex, year in school, importance of religion and course of study

		<i>n</i>	Alcohol		Analgesics		Caffeine		Tobacco	
			X	S.D.	X	S.D.	X	S.D.	X	S.D.
SEX										
	Male	897	20.6	(37)+	30.7	(61)**	258	(284)+	6.9	(7.0)
	Female	794	8.3	(10)	49.1	(165)	320	(300)	6.0	(6.2)
YEAR IN SCHOOL										
	First	853	13.0	(32)**	37.3	(73)	245	(271)+	5.1	(5.4)+
	Last	838	16.4	(24)	43.1	(161)	329	(310)	8.0	(7.5)
IMPORTANCE OF RELIGION										
	Very	926	11.8	(32)+	43.5	(176)	287	294	5.5	(5.3)**
	Not	765	17.7	(24)	37.4	(61)	285	(288)	7.4	(7.6)
COURSE OF STUDY										
	Law	244	25.9	(56)+	47.0	(161)	319	(310)**	7.1	(8.1)**
	Medical	431	13.2	(21)	39.7	(149)	260	(240)	6.5	(7.1)
	Nursing	213	9.4	(11)	47.1	(108)	356	(341)	7.1	(8.0)
	Pharmacy	147	45.1	(19)	42.2	(55)	263	(271)	5.9	(7.6)
	Seminary	130	5.5	(11)	28.9	(53)	368	(340)	5.6	(8.2)
	Social Work/ Psychology	188	9.5	(12)	47.0	(85)	373	(293)	9.9	(10.4)
	Teaching	242	14.6	(28)	39.6	(107)	286	(355)	6.5	(6.4)

*For ease of reading analgesic consumption is calculated on a yearly, rather than on a daily basis, as all groups consumed less than 0.2 tablets per day.

+ $p < 0.01$

** $p < 0.001$

Table 3: Percentages of students by course who had "ever used" drugs and who consider themselves "current users" of various substances (more than once a year) during the 12 months preceding the study.

Students	Alcohol*		Analgesics*		Caffeine**		Tobacco*		Antihistamines		Marijuana*		Sedatives**		Tranquilizers**		Hallucinogens		Stimulants		Cocaine		Opiates	
	Ever	Current	Ever	Current	Ever	Current	Ever	Current	Ever	Current	Ever	Current	Ever	Current	Ever	Current	Ever	Current	Ever	Current	Ever	Current	Ever	Current
	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)
Law (n= 244)	99.9	95.9	90.1	88.2	94.2	92.2	55.2	38.7	28.2	24.9	29.6	17.9	19.9	14.5	12.6	7.1	7.5	1.0	7.1	4.2	3.4	1.7	2.6	1.3
Medical (n= 431)	89.3	84.1	86.6	83.2	94.2	89.2	29.1	23.1	17.0	10.7	18.3	7.5	10.8	6.6	7.9	3.7	5.2	2.0	3.7	1.1	0.9	0.2	2.0	0.6
Nursing (n= 213)	93.0	89.2	89.2	83.5	88.7	86.8	59.2	43.2	28.6	24.4	21.6	6.1	21.1	11.2	17.9	8.0	3.3	0.0	3.3	1.0	0.9	0.0	0.0	0.0
Pharmacy (n= 147)	93.8	91.1	93.2	90.5	95.2	89.1	49.7	34.7	24.5	23.8	15.6	11.6	14.3	8.9	7.5	4.1	4.3	1.4	3.4	1.4	2.4	0.0	0.7	0.0
Police (n= 96)	93.7	88.5	88.5	87.5	86.5	84.4	54.2	35.4	27.1	21.9	6.3	2.1	10.4	5.2	12.5	5.2	3.1	2.5	5.2	1.0	2.1	0.0	1.0	0.0
Seminary (n= 130)	53.1	43.7	92.2	86.8	93.8	92.3	23.4	7.8	35.7	30.1	6.3	0.8	12.5	6.3	16.9	10.1	2.5	0.0	1.6	0.0	1.6	0.0	0.8	0.0
Social Work/ psychology (n= 188)	91.0	87.9	92.0	89.9	95.5	89.1	50.3	37.6	31.2	27.4	6.5	12.7	19.6	11.1	19.6	11.1	7.9	1.6	7.4	1.6	1.1	0.0	3.2	0.0
Teaching (n= 242)	89.3	84.0	89.3	84.3	82.6	78.5	43.8	38.1	30.6	29.4	19.0	8.3	9.1	4.1	7.0	4.5	3.3	1.2	4.5	2.8	0.0	0.0	0.0	0.0
Total (n=1691)	89.3	84.9	89.0	85.1	88.8	86.5	46.5	30.5	29.7	25.3	19.4	9.1	14.7	8.5	11.7	6.1	5.1	1.6	4.5	1.8	1.5	1.0	1.4	1.0
* p < 0.001																								
** p < 0.05																								